

greatest width 0.147 mm., length of setæ at anterior angles 46μ , of outer setæ at posterior angles 74μ , of inner setæ at posterior angles 35μ ; pterothorax, width 0.187 mm.; fore wings, length 0.720 mm., width at middle 0.033 mm., width near base 0.044 mm.

Antennal segments.....	1	2	3	4	5	6	7	8	9
Length (μ).....	18	36	70	47	42	33	11	13	11
Width (μ).....	21	25	18	17	17	14	8	5	4

Total length of antenna 0.281 mm.

Described from 18 females taken "on the leaves of young banana plants near Almirante, Panama," May, 1932, by Mr. John R. Johnston, who has supplied the following note: "You may be quite correct in considering that this species is probably a predacious form, as I was unable to discover any injury whatever on the banana plant that I could attribute to it. This species is not uncommon on the young leaves of banana, but was never abundant."

EXPLANATION OF PLATE.

(The drawings were made with the aid of a camera lucida
by Miss Helen Rearwin.)

Rhabdothrips albus, gen. et sp. nov.

- Fig. 1. Head and prothorax, ♀, paratype; bristles omitted from all appendages.
Fig. 2. Distal portion of seta of tergite 9, ♀, paratype.
Fig. 3. Right fore wing, ♀ paratype; microtrichia omitted.
Fig. 4. Segments 8-10 of abdomen, ♀, paratype.
Fig. 5. Right antenna and portion of head; ♀, holotype.

FIVE NEW HYMENOPTEROUS PARASITES OF THE ORIENTAL FRUIT MOTH.

By C. F. W. MUESEBECK, *Bureau of Entomology.*

This paper contains descriptions of four new Braconidae from Japan and one new species of Bethylidae from Australia, all recorded by investigators of the Bureau of Entomology as parasites of *Grapholitha molesta* Busck.

SUPERFAMILY ICHNEUMONOIDEA.

FAMILY BRACONIDAE.

Bassus diversus, new species.

Differs from all other species of the genus known to me in combining an unusually thin head, sharply impressed and

punctate notauli, strongly rugulose exareolate propodeum, foveolate mesopleural furrow, closely striate three basal abdominal tergites, and black body.

Female.—Length 4 mm. Head strongly transverse, not rostriform; face very broad, broader than distance from antennae to apex of clypeus, covered with minute setiferous punctures; clypeus broad, only very weakly convex; distance between clypeal foveae much greater than length of foveo-ocular line; malar space strongly inclined inward, not half as long as the eye; frons short, polished; frontal impression immargined; vertex polished; ocell-ocular line twice diameter of an ocellus, a little longer than postocellar line; median ocellus barely in front of a line drawn tangent to anterior margins of lateral ocelli; antennae about as long as the body, 31-segmented, inserted only a little below level of upper eye margins; temples strongly receding.

Thorax rather stout, about as broad as head; mesoscutum minutely punctate, shining, with sharply impressed punctate notauli; scutellum convex, smooth, not margined at apex; propodeum convex, completely closely rugose, not areolated; sides of pronotum mostly smooth; prepectus sharply carinately margined; mesopleurum minutely punctate, shining, with a straight foveolate longitudinal groove below the middle; metapleurum rugulose; posterior coxae minutely punctate, shining; inner calcarium of posterior tibia not quite half as long as metatarsus; second cubital cell of anterior wing triangular, short-petiolate; radial cell very narrow, on wing margin a little more than half as long as stigma and just about as long as that part of metacarpus beyond the radial cell; nervulus slightly postfurcal, first brachial cell open at apex, submediellan cell of posterior wing much less than half as long as mediellan; nervellus weak.

Abdomen as long as the thorax but slightly narrower; first tergite longer than broad at apex, with two prominent, nearly parallel, longitudinal dorsal keels extending beyond the middle, the area between them smooth basally; remainder of tergite rather coarsely striate; second and third tergites virtually parallel-sided, closely longitudinally striate except the apex of the third tergite, which is smooth, each of them with a shallow transverse impressed line; remaining tergites smooth and shining; ovipositor sheaths considerably longer than abdomen.

Black; tegulae brownish; wings smoky; coxae black or blackish, the anterior pair brownish beneath; remainder of anterior and middle legs brownish yellow; posterior trochanters and the femora except toward apices blackish; the extreme apices of posterior tibiae and the posterior tarsi, except basally, slightly infuscated.

Type locality.—Mitsuoka, Nagano, Japan.

Type.—U. S. N. M. No. 44850.

Host.—*Grapholitha molesta* Busck.

Three female specimens reared by G. J. Haeussler of the Bureau of Entomology June 28, 1932 (type and one paratype) and August 24, 1932 (one paratype).

Phanerotoma grapholithae, new species.

Very similar to *tibialis* Haldeman, but distinguished especially by having the first abscissa of the radius shorter than the second, by the anterior wings being only very indistinctly banded or maculated, by the more delicate sculpturing of the head, and by the weaker and shorter basal keels of the first tergite and the relatively longer third tergite.

Female.—Length about 3 mm. Head large, quadrate, excavated behind; eyes prominent, nearly circular in outline, bare; face about twice as broad as long from antennae to base of clypeus, finely rugulose, subopaque; clypeus large, smooth and shining, its apical margin broadly rounded and provided with three minute teeth medially; malar space distinctly shorter than basal width of mandible; frons and vertex mostly finely shagreened, with some irregular rugae; temples convex, not receding, scarcely as wide as length of ocell-ocular line, finely lineolated; longest diameter of a lateral ocellus longer than postocellar line but less than half ocell-ocular line; antennae 23-segmented; scape fully twice as long as thick; basal segments of flagellum much lengthened; segments 7 to 11 faintly broadened, the following gradually narrowed; the basal seven segments of flagellum as long as all the following united.

Thorax narrower than head; mesoscutum granular and opaque; scutellum very weakly granular, smooth at apex; propodeum finely rugulose; mesosternum and meso- and metapleurum evenly finely granular, opaque; inner calcarium of posterior tibia very nearly half as long as metatarsus, the latter about as long as the next three tarsal segments combined; parastigma large; radius emerging from beyond middle of stigma; first abscissa of radius a little shorter than second; first intercubitus straight, interstitial with recurrent vein.

Abdomen strongly depressed, about as broad as thorax; first tergite only very slightly longer than second, with two prominent strongly convergent keels arising at the basal lateral margins and not extending beyond the middle of the tergite; second tergite nearly twice as broad as long; the third nearly half again as long as the second; first, second, and base of third tergites longitudinally wrinkled, remainder of third tergite finely rugulose; ovipositor not exerted.

Yellow; mandibles ferruginous, tips black; apices of antennae weakly fuscous; stemmaticum black; the broad polished curved line bounding the scutellum behind piceous; legs entirely yellow, with only the posterior tibia slightly infuscated on the sides near apex; wings hyaline; stigma brownish, pale at base and very narrowly so at apex; a faint indefinite cloud just below stigma and covering first abscissa of radius.

Male.—Essentially as in the female; ocell-ocular line not more than twice the greatest diameter of a lateral ocellus, and the antennal flagellum not broadened beyond the middle.

Type-locality.—Takatsu, Kanagawa, Japan.

Allotype-locality.—Hara, Shizuoka, Japan.

Type.—U. S. N. M. No. 44851.

Host.—*Grapholitha molesta* Busck.

Described from 14 females and 10 males reared from the

above host by G. J. Haeussler, of the Bureau of Entomology. The paratypes are from various localities in Japan and Chosen.

Apanteles molestae, new species.

Related to *agilis* Ashmead but differing from that species in the closely sculptured and opaque first and second abdominal tergites, the longer first abscissa of radius, and the slightly longer ovipositor.

Female.—Length 2.7 mm. Head thin, the temples strongly receding; the face only very weakly convex, narrowing a little below, very shallowly punctate, subopaque; malar space not distinctly as long as basal width of mandible; eyes elliptical; frons and vertex with very faint punctures, sub-opaque; ocell-ocular line longer than postocellar line, about twice the diameter of an ocellus; antennae scarcely as long as the body; the four apical segments but little longer than broad.

Thorax stout, much broader than head; mesoscutum with closely placed but definitely separate punctures, rather opaque; disk of scutellum large, flat, polished, with only a few very faint punctures laterally; polished area on lateral face of scutellum not extending half way to the base; propodeum broad, evenly convex, with a large oval well-defined areola; costulae distinct; surface of propodeum mostly smooth, with only indefinite sculpture in the areola, along the costulae and sometimes in the apical areas; mesopleurum smooth except anteriorly where it is closely punctate; metapleurum smooth; posterior coxa smooth, with only a few weak punctures at base above; inner calcarium of posterior tibia about half as long as metatarsus; radius emerging from slightly beyond middle of stigma, the first abscissa weakly curved, a little longer than recurrent vein, intercubitus, or width of stigma, and only weakly angled with the intercubitus.

Abdomen narrower than propodeum; first tergite large, broadening very slightly behind, closely finely rugulose, longitudinally so posteriorly, and with an irregular elongate median impression on posterior half, which is mostly smooth; second tergite strongly transverse, much longer medially than at the sides, its posterior margin strongly arcuate; surface of second tergite very delicately wrinkled and opaque; remainder of dorsum of abdomen smooth but subopaque; ovipositor sheath at least as long as posterior tarsus, unusually slender, slightly broadened on apical fourth, and with a distinct apical spine.

Black; antennae entirely black; tegulae black; wings hyaline, stigma brown, indefinitely lighter toward apex and with a small indistinct paler spot at base; legs black, the anterior femora except at extreme base, and their tibiae and tarsi, yellowish; middle tibiae on basal half, their tarsi, and posterior tibiae at extreme base brown.

Male.—Differs from the female principally in the longer antennae, which are definitely longer than the body, in the practically smooth second tergite, the darker anterior femora, and the paler stigma.

Type locality.—Kariha-Mura, Niigata, Japan.

Allotype locality.—Dogo, Ehime, Japan.

Host.—*Grapholitha molesta* Busck.

Type.—U. S. N. M. No. 44852.

Described from three females and two males reared by G. J. Haeussler of the Bureau of Entomology. One female paratype is from Saiden, Okayama, the other from Oanshimura, Kagawa, Japan, and the male paratype is from Suigen, Keikido, Chosen.

Orgilus longiceps, new species.

This species is very similar to *obscurator* (Nees) but is readily separated from that species by its even longer and more strongly compressed head, by its punctate rather than rugulose face, by having the propodeum broadly polished across the base, and by its paler clypeus, mandibles, antennae, and legs.

Female.—Length 3.5 mm. Head long, compressed, not wider than thorax; face prominent, apparently a little longer than broad, punctate and shining; clypeus strongly transversely convex; cheeks and lower temples flaring slightly beyond the eyes, smooth and shining, sharply margined; malar space fully as long as basal width of mandible; eyes twice as long as broad, narrowing below; frons abrupt, rather short; vertex narrow, smooth; ocell-ocular line indistinctly longer than the greatest diameter of a lateral ocellus, a little shorter than post-ocellar line; head descending abruptly behind lateral ocelli; occipital carina broadly effaced medially; antennae nearly as long as the body, 31-segmented, the apical 10 or 12 segments not longer than broad.

Thorax slender, narrower than high; notauli sharply impressed, finely foveolate or punctate; mesoscutum and scutellum smooth, finely hairy; impression at base of scutellum broad and deep; propodeum convex, smooth and polished across the base, the remainder of its surface finely rugulose; lateral face of pronotum finely wrinkled and subopaque except in the upper posterior angle where it is mostly smooth; mesopleurum polished, with a longitudinal finely foveolate furrow below; metapleurum smooth and shining except at extreme apex; posterior coxa finely roughened and subopaque above; inner calcarium of posterior tibia slightly more than half as long as metatarsus; stigma narrow, less than one-third as broad as long, emitting radius from slightly beyond its middle; first abscissa of radius strongly oblique, a little longer than width of stigma, much shorter than first intercubitus; second abscissa of radius straight, on a line with first intercubitus and nearly parallel with outer side of stigma; radial cell on wing margin scarcely longer than stigma, its apex far from apex of wing; recurrent entering first cubital cell, removed by about half its length from intercubitus; stub of cubitus beyond intercubitus longer than second abscissa of cubitus; nervulus very slightly postfurcal or interstitial; first brachial cell closed at apex; subdiscoideus arising far below the middle of outer side of first brachial cell; submediellan cell complete and more than half as long as mediellan.

Abdomen at least as long as thorax, slightly narrower, depressed; first tergite broadening gradually to apex, where it is slightly more than half as broad as long, its spiracles well before the middle and farther from each other than from base of tergite, its surface finely longitudinally wrinkled; second tergite one and one-half times as broad as long, nearly parallel sided, closely finely longitudinally

rugulose except for a small basal median area, which is smooth and polished; third tergite shorter than the second, mostly smooth and polished but with a finely rugulose or punctate band across the middle; remaining tergites polished; ovipositor sheaths very slender, distinctly longer than the abdomen, fully as long as posterior tibia and tarsus combined.

Black; palpi blackish; clypeus, except at base, and mandibles ferruginous; basal half of flagellum and under side of scape brownish yellow; anterior and middle legs including coxae ferruginous; posterior legs ferruginous except for basal two-thirds of coxae, apices of posterior femora, especially above, and the apices of posterior tibiae, which parts are more or less blackish; wings weakly infumated; basal two-thirds of venter of abdomen brownish yellow.

Male.—Like female except that apical antennal segments are more elongate. Antennae of allotype 30-segmented.

Type locality.—Togo, Shizuoka, Japan.

Allotype locality.—Mito, Ibaragi, Japan.

Type.—U. S. N. M. No. 44853.

Host.—*Grapholitha molesta* Busck.

Described from two females and three males, the female paratype and one male paratype from the type locality, the second male paratype from the allotype locality, all reared by G. J. Haeussler, June and July, 1932.

SUPERFAMILY MUTILLOIDEA.

FAMILY BETHYLIDAE.

Perisierola angulata, new species.

Distinguished especially by having the apex of the radius bent forward at a right angle, by the unusually small stigma, the somewhat infumated wings, the distinct and complete parapsidal grooves, and the long eyes, which are fully three times as long as the distance from the upper edge of eyes to the vertex.

Female.—Length 2.5 mm. Head only slightly longer than broad; eyes at least twice as long as broad, at least as long as width of face; malar space practically wanting; clypeus compressed, keeled, the keel extending only slightly above level of lower eye margins; surface of the head minutely coriaceous with scattered shallow setiferous punctures; vertex acute; temples receding sharply from directly behind the eyes, delicately reticulate; posterior ocelli touching the acute ridge of the vertex; ocell-ocular line only slightly longer than post-ocular line; antennae 13-segmented, but little longer than head; scape stout, about twice as long as wide; pedicel slightly longer than first segment of flagellum, subequal with second and third flagellar segments; the following segments successively faintly shorter, except the apical segment, which is nearly as long as the pedicel; none of the segments beyond the scape twice as long as broad.

Thorax hardly as broad as head, depressed; pronotum large, more than one and one-half times as long as mesoscutum, delicately reticulated, shining;

mesoscutum strongly transverse, more than twice as broad as long, with distinct parapsidal grooves, sculptured like pronotum; disk of scutellum flat, a little broader than long, with a small elongate puncture on each side at base, its surface weakly reticulate like mesoscutum; propodeum narrowing gradually posteriorly, carinately margined at sides, dorsal face much longer than posterior face and not separated from it by a carina; down the middle and on posterior face the propodeum is nearly smooth, laterad on the dorsal face it is delicately wrinkled; all femora considerably swollen, the anterior pair the largest, the middle pair the smallest; stigma small, subquadrate, not longer than parastigma; radius long, bent sharply forward at apex, the short apical section forming virtually a right angle with the long basal abscissa and usually nearly attaining anterior margin of wing; first discoidal cell complete, short-petiolate; posterior wings without distinct venation. Abdomen as long as thorax and slightly broader although strongly narrowed toward base and apex, entirely smooth and shining.

Black; the antennae yellowish brown toward base, brownish black apically; legs black or brownish black; anterior tibiae and all tarsi brownish yellow; wings rather strongly infumated, the stigma and parastigma dark brown, the veins paler.

Male.—Like the female in all important respects, but the abdomen is rather broadly rounded at apex, and the antennae and legs are paler, the anterior coxae entirely, the anterior femora except along the dorsal edge, and the middle coxae below, usually brownish yellow.

Type locality.—Eastwood, New South Wales, Australia.

Type.—U. S. N. M. No. 44854.

Host.—*Grapholitha molesta* Busck.

Described from 16 females and 8 males reared by R. W. Burrell, of the Bureau of Entomology, in 1931. The National Collection contains, in addition, a considerable number of insectary-bred specimens from Sydney, New South Wales, *G. molesta* likewise being the host of this material.

This species was first identified as an undescribed species of *Perisiclerola* by Mr. A. B. Gahan. He has suggested that I describe it in this paper along with the other new foreign parasites of the Oriental fruit moth for which names are desired.

NEW SPECIES OF HELMIDAE (COLEOPTERA).

By PAUL N. MUSGRAVE, *Fairmont, West Virginia.*

Helmis dietrichi, n. sp.

Male.—(Figure 2, A)—*General*.—Body elongate, convex, piceous black with four oblique luteous bands on elytra located as in figure, moderately shining; ventral side, base of antennae, palpi, front margin of pronotum and legs, rufous. Length 2.5 mm. Greatest width, across elytra, slightly less than 1 mm. *Head* globose, inserted in the prothorax to the eyes, surface granular, sparsely covered